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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/054,442	01/22/2002	Christoffer Apneseth	MP.-NR. 99/628	5330

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EXAMINER	
CHO, HONG SOL	

ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 11/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/054,442	APNESETH ET AL.	
	Examiner	Art Unit	
	Hong Cho	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 January 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *04222002*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 3 and 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacLellan et al (U.S 5940006), hereinafter referred to as MacLellan in view of Moriya et al (U.S 5835489), hereinafter referred to as Moriya.

Re claims 1 and 3, MacLellan discloses a modulated backscatter system of radiating a radio-frequency (RF) signal between an interrogator and tags (*radiating a broadband radio-frequency signal between a base station and a multiplicity of subscribers, the subscribers being located at different distances from the base station*, figure 1; column 16, lines 39-47), coding the broadband radio-frequency signal received in the subscribers in accordance with a code division multiple access method according to information to be transmitted resulting in a coded broadband radio-frequency signal, modulating the coded broadband radio-frequency signal resulting in a modulated broadband radio-frequency signal, reflecting back the modulated broadband radio-

frequency signal to the base station resulting in response signals received in the base station in accordance with a direct sequence spread spectrum method (column 12, line 65 to column 13, line 5, column 13, line 14-15; column 16, lines 39-56). MacLellan fails to disclose effecting a signal correlation and demodulation of the response signals received in the base station, during the signal correlation, a time offset of a correlation peak is achieved and a time of the time offset of the correlation peak is calculated in such a manner that the response signals received from the subscribers disposed at a shorter distance to the base station are more attenuated than the response signals of the subscribers disposed at a greater distance from the base station, resulting in automatic compensation for different propagation losses between the subscribers located at the different distances from the base station. Moriya discloses a correlator detecting the maximized degree of correlation between the second composite spread spectrum signal (column 3, lines 44-52). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify MacLellan to implement the correlator of Moriya in measuring the degree of correlation so that the output signal of the correlator peaks. Neither MacLellan nor Moriya discloses calculating a time of the time offset of the correlation peak such a manner that the response signals received from the subscribers disposed at a shorter distance to the base station are more attenuated than the response signals of the subscribers disposed at a greater distance from the base station, resulting in automatic compensation for different propagation losses between the subscribers located at the different distances from the base station. It is well known in the art that the intensity of the reception signal becomes weaker in accordance with the

propagation distance of the radio wave. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify MacLellan to attenuate more the response signals received from the subscribers disposed at a shorter distance to the base station than the response signals of the subscribers disposed at a greater distance from the base station so that the modulated backscatter system of MacLellan would have no mechanism for power control (column 14, lines 63-65).

Re claims 5 and 6, MacLellan discloses an interrogator transmitting a modulated signal in accordance with a direct sequence spread spectrum method (*a base station radiating a broadband radio-frequency signal and having a transmitting device, a modulator connected to said transmitting device*, figure 11; column 12, line 65 to column 13, line 5, column 13, line 14-15; column 16, lines 39-56) and demodulating the received signal (*a receiving device and a demodulator*, column 16, lines 54-56). MacLellan fails to disclose a correlator connected to a receiving device. Moriya discloses a correlator detecting the maximized degree of correlation between the second composite spread spectrum signal (column 3, lines 44-52). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify MacLellan to implement the correlator of Moriya in measuring the degree of correlation so that the output signal of the correlator peaks. MacLellan discloses a modulated backscatter system of radiating a radio-frequency (RF) signal between an interrogator and tags (*radiating a broadband radio-frequency signal between a base station and a multiplicity of subscribers located at different distances from the base station*, figure 1; column 16, lines 39-47), each tag having a modulation device and an antenna/backscattering device

for receiving the broadband radio-frequency signal (figure 9) and for reflecting a response signal, coded in accordance with a code division multiple access method and modulated by said modulation device in accordance with information to be transmitted, said modulation device connected to said antenna/backscattering device (column 4, lines 5-7). MacLellan fails to discloses a correlator of said base station performing automatic compensation for different propagation losses between said subscribers located at different distances from said base station by linking a correlation function and a propagation loss to one another in an inverse relationship. Moriya discloses a correlator detecting the maximized degree of correlation between the second composite spread spectrum signal (column 3, lines 44-52). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify MacLellan to implement the correlator of Moriya in measuring the degree of correlation so that the output signal of the correlator peaks. Neither MacLellan nor Moriya discloses linking a correlation function and a propagation loss to one another in an inverse relationship for automatic compensation for different propagation losses between the subscribers located at the different distances from the base station. It is well known in the art that the intensity of the reception signal becomes weaker in accordance with the propagation distance of the radio wave. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify MacLellan to attenuate more the response signals received from the subscribers disposed at a shorter distance to the base station than the response signals of the subscribers disposed at a greater distance from the base station by linking a correlation function and a propagation

loss to one another in an inverse relationship so that the modulated backscatter system of MacLellan would have no mechanism for power control (column 14, lines 63-65).

Re claims 7-10, MacLellan discloses an interrogator transmitting a modulated signal to tags (*automatic production machine with proximity sensors and actuators)* in accordance with a direct sequence spread spectrum method (*a base station radiating a broadband radio-frequency signal and having a transmitting device, a modulator connected to said transmitting device*, figure 11; column 12, line 65 to column 13, line 5, column 13, line 14-15; column 16, lines 39-56) and demodulating the received signal from tags (*a receiving device and a demodulator*, column 16, lines 54-56). MacLellan fails to disclose a correlator connected to a receiving device. Moriya discloses a correlator detecting the maximized degree of correlation between the second composite spread spectrum signal (column 3, lines 44-52). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify MacLellan to implement the correlator of Moriya in measuring the degree of correlation so that the output signal of the correlator peaks. MacLellan discloses a modulated backscatter system of radiating a radio-frequency (RF) signal between an interrogator and tags (*radiating a broadband radio-frequency signal between a base station and a multiplicity of subscribers located at different distances from the base station*, figure 1; column 16, lines 39-47), each tag having a modulation device and an antenna/backscattering device for receiving the broadband radio-frequency signal (figure 9) and for reflecting a response signal, coded in accordance with a code division multiple access method and modulated by said modulation device in accordance with information to be transmitted,

said modulation device connected to said antenna/backscattering device (column 4, lines 5-7). MacLellan fails to disclose a correlator of said base station performing automatic compensation for different propagation losses between said subscribers located at different distances from said base station by linking a correlation function and a propagation loss to one another in an inverse relationship. Moriya discloses a correlator detecting the maximized degree of correlation between the second composite spread spectrum signal (column 3, lines 44-52). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify MacLellan to implement the correlator of Moriya in measuring the degree of correlation so that the output signal of the correlator peaks. Neither MacLellan nor Moriya discloses linking a correlation function and a propagation loss to one another in an inverse relationship for automatic compensation for different propagation losses between the subscribers located at the different distances from the base station. It is well known in the art that the intensity of the reception signal becomes weaker in accordance with the propagation distance of the radio wave. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify MacLellan to attenuate more the response signals received from the subscribers disposed at a shorter distance to the base station than the response signals of the subscribers disposed at a greater distance from the base station by linking a correlation function and a propagation loss to one another in an inverse relationship so that the modulated backscatter system of MacLellan would have no mechanism for power control (column 14, lines 63-65).

Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacLellan in view of Moriya and further in view of Trompower et al (U.S 6052408), hereinafter referred to as Trompower.

Re claims 2 and 4, MacLellan discloses all of the limitations of the base claim, but fails to disclose adapting a chipping rate of the broadband radio-frequency signal emitted by the base station to the different distances or propagation losses between the subscribers and the base station. Trompower discloses dynamically modifying processing gain and/or chipping rate could be dynamically modified for each transmission based on distance between the transmitter and receiver (column 4, lines 38-41). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify MacLellan to have chipping rate modified such that an optimal data transmission rate for that transmission would be achieved thereby enhancing system performance (column 4, lines 41-42).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US Patent (5381444) to Tajima
- US Patent (5729535) to Rostoker et al
- US Patent (6167031) to Olofsson et al

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087. The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3088.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hc
Hong Cho
Patent Examiner
10/25/2005

JOHN PEZZLO
PRIMARY EXAMINER